

# Emefcy Group Limited (ASX: EMC):

Positioned to Capture Growing Opportunities  
in Global Wastewater Markets



**Richard Irving, Executive Chairman**  
**Ross Haghighat, Non-Executive Director**

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# Corporate Overview

## Who We Are

- An innovative, field-proven, wastewater treatment provider
- Founded in 2008, IPO on Australian Stock Exchange in December 2015 under ticker “EMC”
- Management team with broad technical, financial, and operating experience
- Headquartered in Caesarea, Israel, with a global reach

## What We Do

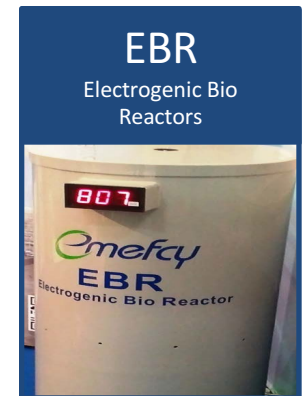
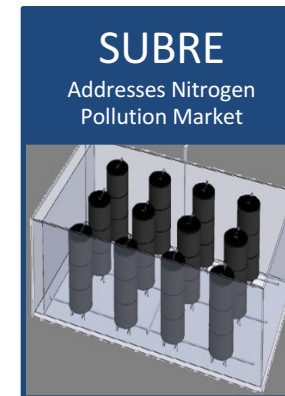
- Global manufacturer of energy efficient wastewater treatment solutions and provider of Treated Water-as-a-Service (TWaaS)
- Offer wastewater treatment solutions to a wide range of public and private end-markets globally

## Our Value Proposition

- Rising global need for wastewater treatment solutions - \$250 billion/year market
- Products are field-proven, energy efficient (~90% lower energy use), and scalable
- Our solutions provide up to 50% OPEX savings



## Our Key Products



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# Solving Global Issues Positions Us to Capture Market Share





# Opportunity Summary

- ✓ **Disruptive Technologies Address Global Need:** Products address annual wastewater and recycling markets of over A\$8 billion/year
- ✓ **Proven MABR Technology:** Multiple customer plants built and operating, two being commissioned in key geographies and pipeline in China, Americas, Europe, ME, and Africa
- ✓ **Existing Product Wins:** MABR technology currently in-field more than two years and expanding into a variety of rural and municipal applications
- ✓ **Strong Sales Pipeline:** High quality sales pipeline aimed towards establishing proof of concept and regional certification
- ✓ **China Opportunity:** Strategy in place to address cumulative A\$20 billion market opportunity in China, deploying 2017 – 2023 – 3 demo plants in process
- ✓ **Treated Water-as-a-Service:** Clear strategy to sell water in addition to products, addressing a global need for clean water and generating higher, recurring profit stream
- ✓ **New Product Expansion:** Multiple new products underway to improve and increase capabilities for our customers

# MABR Benefits Over Existing Technologies

**Our MABR solution uses 90% less energy than previous state-of-the-art treatment solutions**

Metrics	Emefcy – MABR* (per 100 m3/d)	MBR* (per 100 m3/d)
Plant Cost	\$277,000	\$663,000
O&M Cost (per year)	\$4,937	\$13,807
Biological Treatment cost (per year)	\$427	\$3,468

- A MABR plant costs 60% less than a comparable MBR plant and enables just-in-time capex
- MABR O&M costs are 65% less per year than a comparable MBR Plant
- MABR biological treatment costs per year are 90% less than a comparable MBR plant



MABR Facility in Emek Israel Region

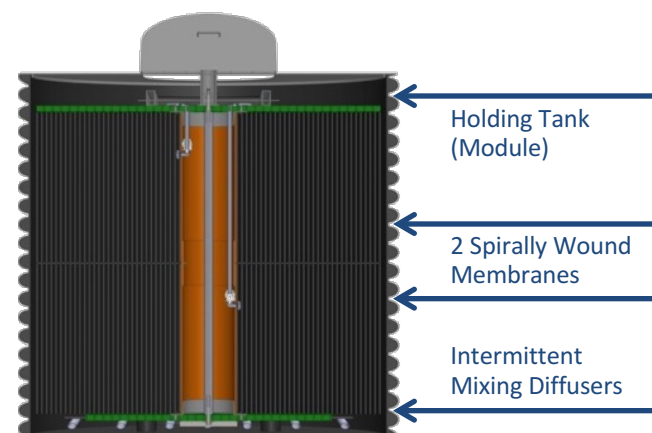
# MABR Technology – Our Flagship Product

## Product Highlights

- Decentralized and highly efficient
- Modular design allows just-in-time capex
- Simple to operate, neighborhood-friendly
- Automated, unattended operation
- Lower CAPEX and OPEX

## Application Range

- Small to medium sized plants
- End markets include rural villages, hotels, resorts, golf courses and municipalities
- Flow rates in the range of 50-5,000 m<sup>3</sup>/d



# Emefcy Owns and Operates its own Proprietary Manufacturing Plants in Israel and Soon in China



Israel production line  
in operation



Manufactured spirals  
await testing



Finished modules ready to ship to site

- Emefcy's Israel plant supports annual production capacity of up to A\$30 million
- Jiangsu, China facility will initially support production capacity of A\$100 million
- Expansion capacity to A\$400 million



Chinese manufacturing facility –  
line in construction

# Strategy To Transform Wastewater Treatment





# Operating Plants: Israel

## 1. Water Recycling Facility

- Health ministry approved automated municipal system operating flawlessly for over two years

## 2. Rural facility recycles wastewater of Moshav Hayogev and Midrach Oz

- Municipal scale MABR wastewater treatment plant
- Localized wastewater treatment solution to replace non-compliant existing lagoon system
- MABR solution treats 125,000 liters per day for agricultural reuse
- Energy-efficient, cost-effective design that fits into small footprint



**Demonstrates Scalable, Reliable Wastewater Treatment Solutions**

# Plant Commencing Operation: US Virgin Islands

## MABR-based wastewater treatment plant in Saint Thomas, U.S. Virgin Islands (USVI)

- Will treat 95,000 liters per day
- Municipal treatment plant in residential area
- First international contract for an MABR-based wastewater treatment plant
- Low capex and opex, low energy consumption, and neighborhood friendly design
- USVI is regulated by the US EPA, providing proof-of-concept for the Americas



**Reference Site and Gateway for Americas Market**

# Plant Deployments in Progress: China

## Strategic Partnerships Accelerate Regional Certification and Deployments

- Partnerships:
  - Wuxi Municipal Design Institute provides access to A\$1 billion opportunity in Jiangsu province
  - Beijing Sinorichen Environmental Protection Corporation provides access to Beijing province and northeast region, a A\$1.4B opportunity
  - Jiangsu Jinzi Environmental Technology Company provides local deployment and operational experience to southern provinces, a A\$2.5 billion opportunity
- Expected to be built over the next five to seven years
- Robust pipeline for potential MABR module distribution

**Significant Milestone In Key High Growth Market**

# Global Pipeline: Focuses on China, USA, and Caribbean

## More than 40 Global Projects Currently in the Pipeline

Country/Region	Number
China	10
Caribbean	9
USA	6
Israel	8
Australia	5
Europe	2
Ethiopia	4
Chile	1
Other	2
<b>Total</b>	<b>47</b>



Active dialogues in North America, China, Latin America, Australia, and Europe



# China



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# China: Market Opportunity To Provide Wastewater Treatment To 440 Million People

## China's new 5 year plan:

Increase rural wastewater treatment from 10% to 70% of population; benefiting 440 million

Potential A\$20 billion opportunity over the next 5-7 years

Revenue per plant estimated up to A\$1 million or more

Most rural wastewater is untreated



Most rural surface water is now polluted



Containerized MABR demo plants accelerate certification

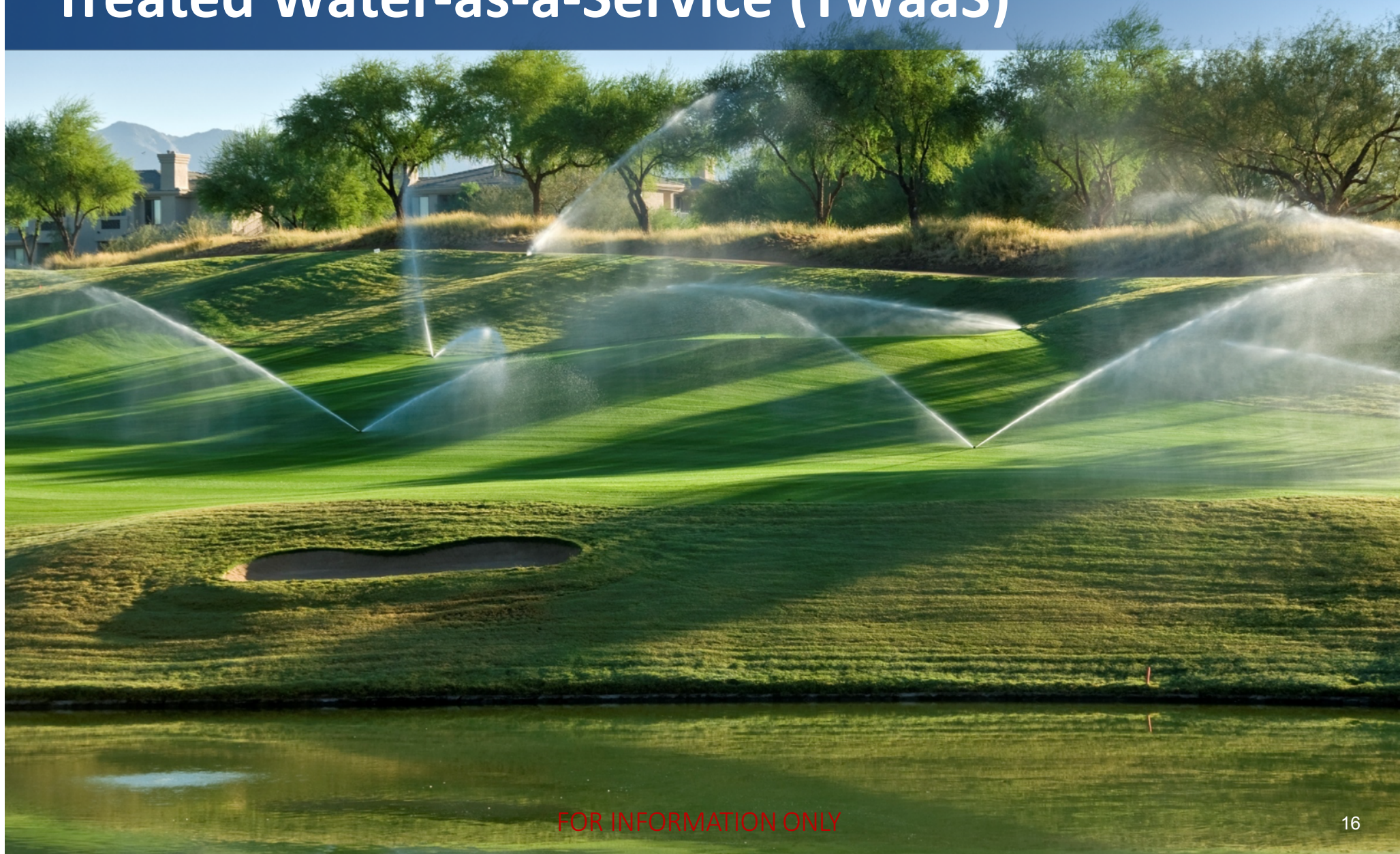


# Strategy to Capture Share of the Chinese Rural Wastewater Treatment Market

Requirement	Progress
Establish Corporate Structure - HK sub with one or more China WFOEs	Done
Build China management team	In Progress
Build, own, and operate expandable China manufacturing capability	In Progress
Establish supply chain partners to source all Emefcy materials	In Progress
Sign market access partners – SOEs, private companies, PPP with strong financial backing	3 signed covering 25% of market More in work
Sign experienced engineering partners	In Progress



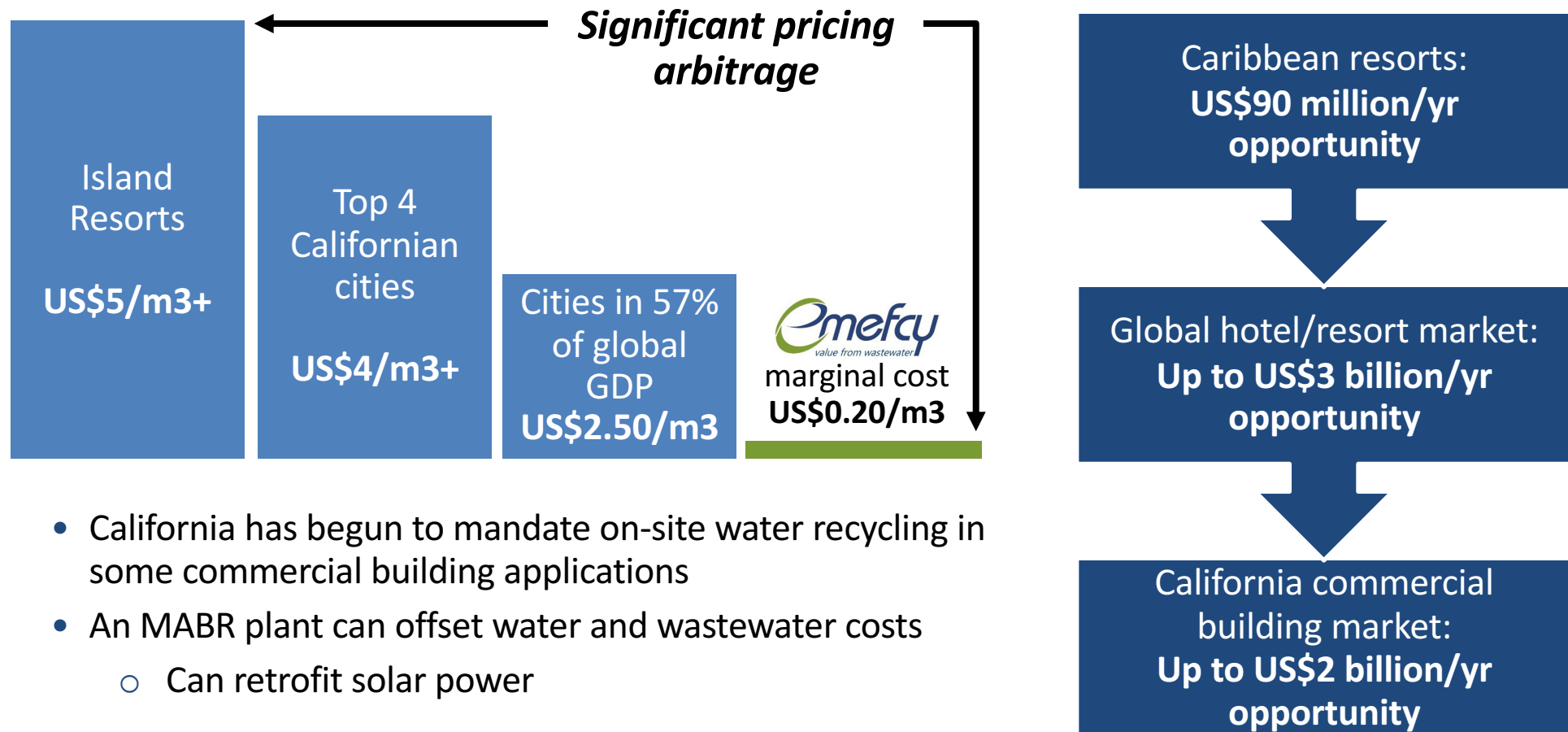
# Treated Water-as-a-Service (TWaaS)



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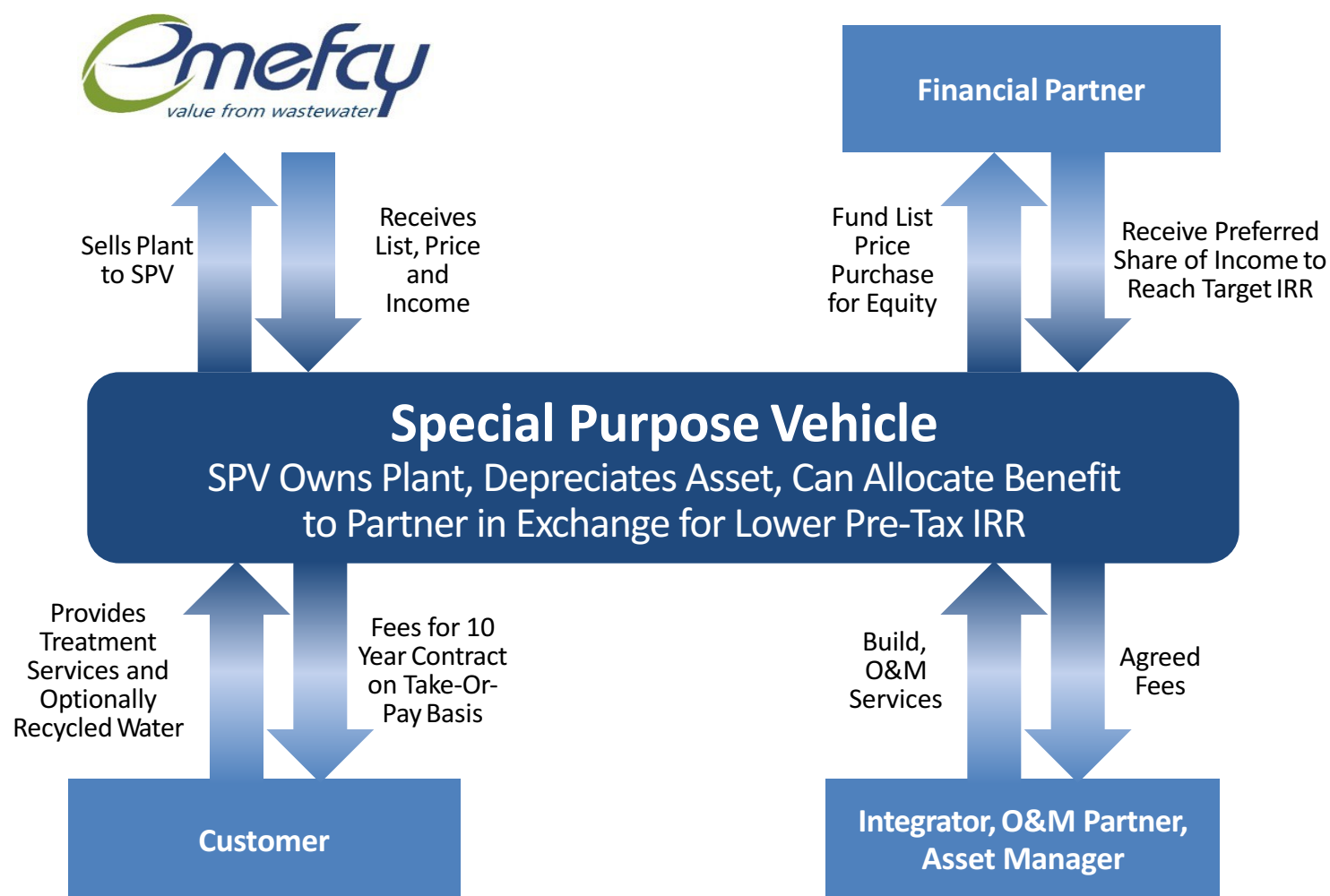
# Selling Water versus Product:

Exploit Pricing Arbitrage To Increase Emefcy Profit While Enabling Net-Zero Water Recycling





# Proposed Treated Water As a Service Business Model





# Future Products Expand Target Markets



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# New Products Increase Share and Address Additional Markets

## New Products Support Larger Contracts, Treated Water-as-a-Service, and China

Product	Market Need	Status and Next Steps	Target End Markets
<b>MABR2</b>	Triples capacity, doubles margin for municipal treatment and water recycling	Testing started and available early 2017 – quoting now	Resorts, midsize treatment plants
<b>MABR3</b>	China-made, China materials – optimized cost and capacity for China and global markets	Build and test in early 2017 Completed by mid 2017 Shipped from China plant late 2017	China and global market
<b>SUBRE</b>	A\$2.5 billion market addressing nitrogen pollution in large wastewater treatment facilities	2016 field pilot Available in 2017	Larger treatment plants
<b>EBR</b>	Further A\$2.7 billion market handling difficult organic industrial wastewater - Unique, ZERO-OPEX solution that makes electricity from wastewater while treating it	2017 field pilot Commercial availability in 2018	Industrial wastewater with high biological load

# Summary

## Our Strategy and Value Proposition

### **Our team**

has the experience and financial capabilities to address market opportunities and provide fresh water to meet increasing global demand

### **We are well positioned**

to address an A\$8 billion/year wastewater treatment and recycling market with our diverse and proven technology

### **Our products**

address critical and increasing need for reusable water with low or zero-energy, scalable technologies

### **We have a clear strategy**

for growth and substantial opportunities to penetrate markets on a global scale

# Thank You



## Investors

<http://www.emefcy.com/investors/>

## Press

<http://www.emefcy.com/press-releases/>

## Video

<http://www.emefcy.com/video-clips/>

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# Key Contacts

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# Seasoned Team Experienced in Building a Global Enterprise



**Richard Irving - Executive Chairman, Emefcy**

- US\$3 billion in shareholder value created
- Multiple startups, 2 Nasdaq IPOs – 30 years in operating & investor roles
- Proven ability to disrupt large, existing markets: LiveRail, Microcosm, Transitive, Brooktree, & more
- \$240M Venture funds founded, raised & managed



**Eytan Levy - Founder & CEO, Emefcy**

- Former Partner, Israel Cleantech Ventures
- Co-founder and CEO of AqWise, a Global Wastewater Treatment company with 350 installations in more than 30 countries
- BSc (cum laude) in Chemical Engineering (Technion) and an MBA



**Ross Haghighat, Non-executive Director, Emefcy**

- Chairman, Triton Systems; Managing Partner, Newburyport Partners
- Founded 9 private and public cos with combined shareholder value of US\$3.8 billion & two billion dollar plus exits (Coretek, Aduro)
- Raised nearly \$500M private & Public Funds
- Director at Aduro Biotech (Nasdaq: ADRO), Chairman of FRX Polymers and Founder & Chairman Triton Systems Group



**Peter Marks, Non-executive Director, Emefcy**

- 30+ years experience in corporate finance, specializing in capital raisings (for listed and unlisted companies), underwriting, IPOs and venture capital transactions.
- Participated in over \$2 billion in public and private capital raised
- Executive and Non-Executive Director of a number of listed entities on the ASX and AIM



**Robert Wale, Non-executive Director, Emefcy**

- Managing Director of BlueSand Consulting
- 30+ years of executive level experience in the global water industry in multiple roles in Australia, USA & throughout the Asia-Pacific region
- Significant experience managing businesses across the cycle, from early stage startup to maturity including Memtec